

# Cotton Yield Estimation

## Estimating Yield By Boll Counting

Estimating yield by counting bolls can often be misleading. Variation in boll size, variation in lint percent, future weather conditions, harvest losses and ginning losses can all effect how boll counts relate to final yield. However variable, people associated with cotton will at some point use boll counts to estimate production or make comparisons.

The following is a general suggestion for using boll counts for production estimation:

A. Take counts on at least 10 feet of row from several representative places in the field. At least four to five locations is recommended.

B. Make a sound estimate of boll size. This may be accomplished in several ways. Suggestion - At random, pick all the seedcotton from 50 to 100 bolls. These bolls should represent all fruiting on the plant. Do not only pick the largest bolls for this sample. Weigh the composite sample on an accurate scale calibrated in grams. Divide the weight (in grams) by the number of bolls picked and this will give an approximate average boll weight for the field. If you are energetic, this calculation should be made for several samples taken to represent the field.

The following table is only a guide. All calculations are based on boll weights being expressed as grams of seedcotton. **Table 1** assumes a lint percent of 35% while **Table 2** assumes a lint percent of 38%.

**This information was retrieved by Dr. Randy Boman, Extension Agronomist-Cotton, Texas Agricultural Extension Service, Lubbock, TX, from a publication authored by Dr. Will McCarty, Extension Cotton Specialist, Mississippi State University at the following Internet address:**

<http://ext.msstate.edu/anr/plantsoil/cotton/bollcount.html>

**Table 1. Bolls per row foot** necessary to produce one bale (480 lbs) per acre at various row spacings and boll weights. Boll weight is expressed as grams of seed cotton. **Lint percent is assumed to be 35%.**

-----		Boll Weight (grams of seed cotton)						
Row width(in)	Row Ft/Ac	5.0 gm	4.5 gm	4.0 gm	3.5 gm	3.0 gm	2.5 gm	2.0 gm
40	13068	9.5	10.6	11.9	13.6	15.9	19.1	23.8
38	13756	9.1	10.1	11.3	12.9	15.1	18.1	22.6
36	14520	8.6	9.5	10.7	12.3	14.3	17.2	21.4
32	16335	7.6	8.5	9.5	10.9	12.7	15.2	19.1
30	17424	7.1	7.9	8.9	10.2	11.9	14.3	17.9
20	26136	4.8	5.3	6.0	6.8	7.9	9.5	11.9
15	34848	3.6	4.0	4.5	5.1	6.0	7.1	8.9
12	43560	2.9	3.2	3.6	4.1	4.8	5.7	7.1
10	52272	2.4	2.6	3.0	3.4	4.1	4.8	6.0
9	58080	2.1	2.4	2.7	3.1	3.6	4.3	5.4
8	65340	1.9	2.1	2.4	2.7	3.2	3.8	4.8
7	74674	1.7	1.9	2.1	2.4	2.8	3.3	4.2
6	87120	1.4	1.6	1.8	2.0	2.4	2.9	3.6

**Bolls Per Square Foot** necessary to produce one bale (480 lbs) per acre at these boll weights. Boll weight is expressed as grams of seed cotton. **Lint percent is assumed to be 35%.**

-----	2.9	3.2	3.6	4.1	4.8	5.7	7.1
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**Bolls Per Acre** necessary to produce one bale (480 lbs) per acre at these boll weights. Boll weight is expressed as grams of seed cotton. **Lint percent is assumed to be 35%.**

5.0 gm	4.5 gm	4.0 gm	3.5 gm	3.0 gm	2.5 gm	2.0 gm	
124,526	138,362	155,657	177,894	207,543	249,051	311,314	

**Table 2. Bolls per row foot** necessary to produce one bale (480 lbs) per acre at various row spacings and boll weights. Boll weight is expressed as grams of seed cotton. **Lint percent is assumed to be 38%.**

-----		Boll Weight (grams of seed cotton)						
Row Width (in)	Row Ft/Ac	5.0 gm	4.5 gm	4.0 gm	3.5 gm	3.0 gm	2.5 gm	2.0 gm
40	13068	8.8	9.8	11.0	12.5	14.6	17.6	21.9
38	13756	8.3	9.3	10.4	11.9	13.9	16.7	20.8
36	14520	7.9	8.8	9.9	11.3	13.2	15.8	19.7
32	16335	7.0	7.8	8.8	10.0	11.7	14.0	17.6
30	17424	6.6	7.3	8.2	9.4	11.0	13.2	16.5
20	26136	4.4	4.9	5.5	6.3	7.3	8.8	11.0
15	34848	3.3	3.7	4.1	4.7	5.5	6.6	8.2
12	43560	2.6	2.9	3.3	3.8	4.4	5.3	6.6
10	52272	2.2	2.4	2.7	3.1	3.7	4.4	5.5
9	58080	2.0	2.2	2.5	2.8	3.3	3.9	4.9
8	65340	1.8	2.0	2.2	2.5	2.9	3.5	4.4
7	74674	1.5	1.7	1.9	2.2	2.6	3.1	3.8
6	87120	1.3	1.5	1.6	1.9	2.2	2.6	3.3

**Bolls per Square Foot** necessary to produce one bale (480 lbs) per acre at these boll weights. Boll weight is expressed as grams of seed cotton. **Lint percent is assumed to be 38%.**

-----	2.6	2.9	3.3	3.8	4.4	5.3	6.6
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**Bolls Per Acre** necessary to produce one bale (480 lbs) per acre at these boll weights. Boll weight is expressed as grams of seed cotton. **Lint percent is assumed to be 38%.**

5.0 gm	4.5 gm	4.0 gm	3.5 gm	3.0 gm	2.5 gm	2.0 gm	
114,695	127,439	143,368	163,850	191,158	229,389	286,737	